Chapter XI

New Software Methodologies and Techniques for Business Models with Evolutionary Aspects

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Abstract

This chapter outlines a number of issues on enterprise design architectures suitable for applications that need flexibility and change in their design. Better understanding of user requirements is needed to reflect the best performance of the system towards its users. Verifying the requirements elicited for best system

performance is an essential task for enterprise systems design. The requirements elicited should reflect the user intention, as he/she has demanded. This chapter presents some of the international Lyee project' results led by Fujita (Fujita 2001) and is structured into two parts: one part reflects the collaborative intention outcome and the other part is related to legacy software outcome. The 1st part shows the impact of correct requirements on enterprise design architectures; it also enlists some of the results achieved by our project. The 2nd part shows the impact of Legacy software using new techniques extracted from an intention-oriented tool, namely Lyee builder. This second part also contributes in showing new techniques for handling legacy software, an issue that is important for handling essential problems related to old generation software, which is our current interest. We have succeeded to build a software diagnosis tool based on the Lyee framework, which is currently used in business practices to diagnose programs written in imperative languages.

User Intention and Requirement Correctness

As more organizations turn their attention to enterprise content management, information architects find themselves working with increasingly diverse teams. Planning content management for an enterprise often requires senior management, enterprise architects, record managers, librarians, and web professionals to work together for the first time. Each field brings its own perspective, processes, motivations, and lingo. Miscommunication is a major project risk, potentially leading parties to drop out and pursue their own solution. Information architects must assume the role of leader, strategist, or facilitator in this situation. The scale of such integration means that demands to keep it robust and consistent is largely needed, especially in the current flattening rather than globalized stage of world blooming economy.

Intention and user requirements need to reflect on each other in an efficient way. In the past five years we have worked, together with many researchers, on a joint project to bring about a new state of the art in business enterprise architectures that can be able to generate and integrate systems that fillfull user demands (Fujita, 2001) efficiently and productively. We have expolred a method named Lyee for software development (Negoro, 2001), on which we have made measurable extendable improvements in not only its ability to increase throughput, but more importantly in the quality of its operability as a business development tool.